

# IN OUR BACKYARD

JAN - 7 1992



## AN UPDATE FROM THE ALBERTA SPECIAL WASTE MANAGEMENT CORPORATION

### Season's Greetings

December 1991  
Volume 2  
Number 5

1991 has been a year of change, some of it astounding, some of it disturbing, but all of it on a scale unprecedented in history.

So it's hardly surprising that, amidst reports of government instability and economic troubles world-wide, the truly reassuring news tends to be overlooked.

Much of this good news concerns our environment.

While television cameras captured the high drama of Albertans fighting Kuwait's oil well fires, other Albertans were winning an equally important battle against chemical pollution.

In their determination to preserve the environment, ordinary Albertans established themselves as world leaders in the management of hazardous wastes.

Provincial communities outdid North America's major cities in rounding up household hazardous wastes to the extent that Alberta outranks even California in per capita participation in collection programs.

Provincial businesses Norcen Energy and UFA demonstrated their commitment by sponsoring Toxic Round Up Alberta and Oil Recovery Alberta respectively.

Other companies like Dow Chemical and Syncrude expanded their on-site waste minimization programs and encouraged the participation of all employees.

And throughout Alberta, major industries and municipalities continued to work cooperatively and creatively in meeting the waste management challenge.

In a world of change, we're changing things for the better.

To you and your family, we extend our best wishes for a Peaceful Holiday and a Prosperous New Year.

### "Joy to the World"

#### CHRISTMAS CARD CONTEST

Response to our Children's Christmas Card Contest was excellent. We received well over 800 entries from schools across Alberta – and the standard was extremely high.

Judging was conducted with the help of practicing communications designers. They

had the difficult job of deciding not only the quality of design but how well the cards reflected the Corporation's message.

The winning design was created by Simon Schopman, a Grade 4 student at Vauxhall Elementary School, Vauxhall, Alberta. Simon's school was



awarded a \$100 gift certificate from a local book store for his school, and Simon received a mounted "There is a Better Way" poster and his original artwork framed as a personal memento.

Our congratulations go out to all the talented young people who shared their ideas with us – and we extend our sincere thanks to all the schools, clubs and community groups who took part.

- ▲ WASTE MINIMIZATION AT SYNCRUDE
- ▲ HOUSEHOLD HAZARDOUS WASTE COLLECTION
- ▲ INTERNATIONAL TRADE MISSION
- ▲ CHRISTMAS ALTERNATIVES
- ▲ CALL DIRECT

Produced every two months by the Alberta Special Waste Management Corporation, "In Our Backyard" is intended to keep Albertans updated on issues and solutions in hazardous waste management. You can contribute to the process by "recycling" this newsletter. Pass it on to a friend with your comments. And should you have suggestions you wish to share, pass them on to us. Our address, phone and fax number are on Page 4.



Alberta  
Special Waste  
Management  
Corporation  
AN ALBERTA CROWN CORPORATION

This newsletter is printed on recycled paper.



# For Syncrude at Fort McMurray, waste minimization is a refined process

In recent issues of *In Our Backyard*, we have been focussing on the efforts being made by some of Alberta's leading industries to minimize hazardous and special waste. It's reassuring to know that, in most cases, the programs instituted by industry exemplify the very best in waste management practice. In this issue, we feature Syncrude's efforts to reduce waste.

Syncrude Canada Ltd. operates the largest synthetic crude oil production facility in the world. Its oil sands plant, located 40 kilometres north of Fort McMurray at Mildred Lake, produces approximately 60 million barrels of synthetic crude oil annually. This represents over 10 percent of Canada's total oil requirements.

The Athabasca oil sands, on which Syncrude is located, hold five times the reserves of Saudi Arabia. This is the world's largest single oil deposit, containing an estimated

870 billion barrels of bitumen. Approximately 10 percent of the deposit is believed recoverable through surface mining.

Syncrude mines oil sand from an open pit mine, extracts the bitumen (as the raw oil is called ) using steam and hot water, and upgrades it into synthetic crude oil by fluid coking, hydrocracking, hydrotreating and reblending. The synthetic crude oil is sent down a pipeline to Edmonton and then to refineries.

## WASTE MINIMIZATION BY THE FOUR RS



The production, handling and disposal of waste is part of normal operations at Syncrude. Since the company has such a vast operation at Mildred Lake, the actual volume of waste makes its waste management policies of crucial importance.

Syed Ali, Waste Management Specialist at the plant, explains:

*"As a business operation, Syncrude obviously wants to recover as much of its cost as possible. At the same time, it must comply with applicable regulations, to protect human health and the environment.*

*But there's more to it than that. At Syncrude we've always been committed to environmental protection as part of our overall business practice. So, while the economics of waste handling and disposal are a major consideration, our program is primarily based on environmental concerns.*

*Remember: our waste management programs were instituted six or seven years ago – long before waste management gained its present high profile – not because of necessity but because of an acknowledged responsibility to the community."*

Early acknowledgement of the situation, says Ali, enabled Syncrude to institute the strategies which now involve every part of this giant operation – and every one of its 4,450 employees – in a campaign to reduce the generation of wastes at source.

It's a huge challenge – yet it's based on a simple rule which has since become familiar to homes, businesses and institutions throughout Alberta: **Reduce, Re-use, Recycle and Recover.**

*"The Four Rs," says Syed Ali, "are seen not only as the key to minimizing waste but as the solution to problems related to waste. They are principles followed in all Syncrude operations."*

## WASTE MANAGEMENT PROGRAM

Adherence to the Four Rs is evident throughout the complex. All wastes are managed through a comprehensive program which ensures they are monitored and controlled from the time of generation through transportation, temporary storage, and ultimate disposal.

The program is administered by the Waste Management Specialist who develops and updates waste management guidelines, provides advice regarding the disposal of new or unusual waste streams, and examines and summarizes plant-wide disposal activities.

Under the program, the area generating waste is responsible for ensuring that it is handled appropriately and disposed of safely. This clear designation of responsibility provides an incentive to follow the Four Rs strategy.

## THE PERMIT SYSTEM

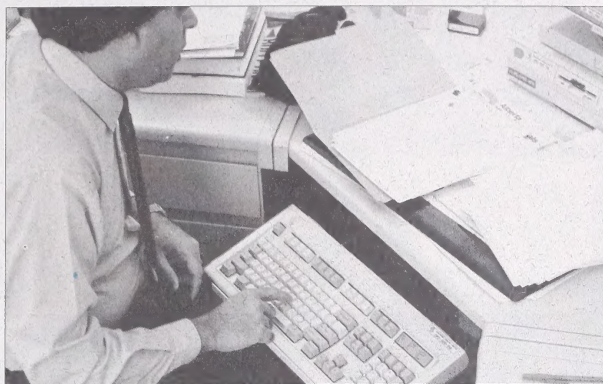
To ensure safe disposal, a comprehensive waste disposal permit system is used which requires specific information on what is being discarded and where. The permit includes a computerized record that tracks waste materials on site by their disposal location, type and origin.

Non-hazardous wastes are directed to any of three approved on-site disposal locations while hazardous and special wastes are held in an interim storage area. Besides tracking waste, the permit system provides information on waste trends and helps to monitor overall disposal activities.



*The Syncrude operation near Fort McMurray: the world's largest synthetic crude oil facility.*





*Keeping track: Syncrude's computerized system monitors disposal activities, provides information on waste trends.*

Within Syncrude's waste management program, particularly heavy emphasis is placed on waste reduction. No matter what other measures are taken, it is recognized that, without a significant effort to minimize the generation of wastes, the program will be neither cost-effective nor comprehensive.

## IMPRESSIVE RESULTS

The implementation of the Four Rs strategy has resulted in greater employee awareness and has improved cost effectiveness throughout Syncrude operations.

**Reduction** Within the Chemical Management Program, notable reductions have been achieved in the use of hazardous chemicals. For example, one department switched a corrosion inhibitor from chromate – a salt of chromic acid – to a biodegradable phosphate-based product.

In other areas, the consumption of Freon – a fluorocarbon used in refrigeration, air conditioning and other applications – has been cut significantly, with the ultimate goal of total elimination.

The reduction of waste is not limited to chemicals. One department recently began remachining worn shafts and bearings, allowing them to be used again in lighter service

and reclaiming otherwise wasted metals.

All departments and departmental offices are involved in the waste minimization campaign – as exemplified by the practice of two-sided photocopying – now being adopted in a determined effort to save paper.

Inevitably, the Four Rs strategy produces savings that extend beyond that of protecting the environment. This is evident in the increased Re-Use of materials that were once discarded without a second thought. Rags, for instance, are now laundered to allow for several uses. Used Freon is collected and cleaned before it is used again in the heating, ventilation and air conditioning system. Used glycol is also re-used as a conveyor belt wetting agent and to winterize site fire hydrants.

**Recycling** activities are becoming increasingly evident. One of the company's biggest successes to date has been that of recycling its hydrotreater catalyst. Used catalyst is now sent off-site for regeneration or clean-up and is returned to be re-used a number of times before disposal.

During the last three months, approximately 30 tonnes of paper, 12,000 beverage containers, and 38 000 litres of used oil have been recycled.

The **Recovery** of materials is another important area. The plant's greatest success so far has been in recovering metals from used catalyst that can no longer be recycled. Metals used in its manufacture, such as nickel, zinc and copper, or those metals added from the oil sands, such as vanadium, are recovered by metal refining companies for subsequent use as feedstock.

Silver is another valuable material present in waste. By saving all spent negatives from its printing operation, a truck-load is collected every year and sent to a recycler for recovery of this precious metal.

## EMPLOYEES MAKE IT WORK

Syncrude recognizes that, for program effectiveness, all levels of personnel should be included. To achieve this, an Environmental Action Steering Team (EAST) has been formed which encourages employees to learn how to minimize environmental impact at work and at home.

The team is composed of employees from across the site who share a common interest in the company's environmental initiatives. EAST helps to establish and coordinate working groups, and to develop strategies from an environmental and safety standpoint.

Employees are also encouraged to contact a Hotline with their environmental concerns or suggestions for minimizing waste generation.

## TUNED IN

To help emphasize the Four Rs, Syncrude has produced an employee video entitled, "War On Waste". Its purpose is to stimulate awareness of waste generation, show its impact on the organization and the environment, and to demonstrate ways in which waste generation can be reduced.

# Household Hazardous Waste Collection

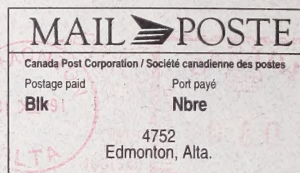
Ten years after the inception of household hazardous waste collection programs in North America, results indicate that the grass roots approach to hazardous waste management is a resounding success.

- ▲ Across the continent, the number of new permanent collection sites has increased significantly.
- ▲ In 1991, the total of permanent collection programs in operation in the U.S. increased to 96 from 56 in 1990.
- ▲ 822 collection programs were held in 1990 in North America. That's a huge increase from 1985 when 175 programs were conducted.
- ▲ In Alberta, the County of Parkland and an increasing number of other rural municipalities now have year-round collection at their landfill sites.
- ▲ The Nisku and Calgary Transfer Stations accept household hazardous wastes year-round, and the City of Calgary is establishing four year-round drop-off sites.
- ▲ More Alberta communities than ever are holding Paint Exchanges - contributing to a huge reduction in the waste stream. Comprising 50 to 70 percent of the typical household hazardous waste stream, paint now makes up less than 20 percent of the waste stream in Alberta.



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## West Goes East

As this issue goes to press, some of the Corporation's key people are in the Far East – on a trade mission to promote Alberta's expertise in special waste management. Alberta Special Waste Management's **Bob Clark**, Chairman of the Board, **Ken Simpson**, President, and **Ed Shaske**, Chief of Marketing Operations, are accompanying Environment Minister **Ralph Klein** on the nine-day trip. The mission is being undertaken at the invitation of representatives of the Republic of China who recently visited Alberta to study our waste management systems.

## Some Christmas Alternatives

**THAT'S A WRAP!** Want to give your Christmas gifts a distinctive look?

Wrap them in the colorful Comic Pages from your weekend newspaper.

**FIT TO BE TIED?** If you get knotted over the price of fancy gift trimmings, try using remnants of coloured wool in the brightest shades you can find – the thicker, the better.

**THE HIGHEST DECORATION.** Mother Nature will thank you for passing up foil decorations in favour of traditional strings of popcorn. Or set the kids to work making chains using waste paper and flour-and-water paste.

**SPARE THAT TREE.** Although Canada's Christmas tree industry is probably more helpful than harmful to the environment, you might want to consider a plas-

tic tree as a re-usable and fire-safe alternative. Plastic trees also provide a market for the country's continuing flood of waste plastics.

**PINING FOR THE PAST?** Try using pine cones instead of expensive gift shop tree decorations for a more authentic Christmas tree. Youngsters enjoy painting and decorating the cones – and the squirrels can probably find a use for them in the New Year.

### CENTRE OF ATTENTION

The Alberta Special Waste Treatment Centre continues to attract the attention of other waste management jurisdictions and of specialists from around the globe. By November 30 of this year, over 1,760 people had visited the Centre. By comparison, 1,742 visitors toured the Centre in 1989.

### ALBERTA WASTE MINIMIZATION CONGRESS

The Environmental Resource Centre will be hosting an Alberta Waste Minimization Congress February 28, 1992 at the Edmonton Convention Centre. The congress is designed to bring all stakeholders to one location to exchange information on waste minimization. Six industry-specific workshops will be offered at the day-long session, for the Food and Beverage Service, Construction/Demolition, Offices, Retail, Manufacturing and Automotive sectors.

For further information, please contact the **Environmental Resource Centre at 433-8711.** (Edmonton)

## CALL DIRECT:

- ▲ For information on:
  - Hazardous Waste Management Programs in Alberta
  - Toxic Round Ups
  - Community Study Groups
  - Used Oil Program**ALBERTA SPECIAL WASTE MANAGEMENT CORPORATION**  
1-800-272-8873  
422-5029 (Edmonton)  
428-9627 (Fax)
- ▲ For information on the transportation of dangerous goods:  
**ALBERTA PUBLIC SAFETY SERVICES**  
1-800-272-9600 (24 Hours)

- ▲ For a directory of waste management companies in Alberta:  
**ENVIRONMENTAL SERVICES ASSOCIATION OF ALBERTA**  
424-6384 (Edmonton)  
Hot Line (for small businesses)  
1-800-661- Waste (9278)
- ▲ For information on:
  - Recycling: Newspaper, Metals, Plastics, Clothing**RECYCLING BRANCH, ALBERTA ENVIRONMENT**  
427-5838 (Edmonton)  
297-5925 (Calgary)

- ▲ To report an environmental emergency or to register a complaint:  
**POLLUTION CONTROL DIVISION, ALBERTA ENVIRONMENT**  
1-800-222-6514 (24 Hours)
- ▲ To access the clearing house that puts potential users of waste materials in contact with waste producers:  
**ALBERTA WASTE MATERIALS EXCHANGE**  
450-5408 (Edmonton)

**ALBERTA SPECIAL WASTE MANAGEMENT CORPORATION**  
610 - 10909 Jasper Ave.  
Edmonton, Alberta  
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*We're making a world  
of difference.*